SAFETY DATA SHEETS

This SDS packet was issued with item:

074269411

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

074269023 071612704 074269031 074269049 074269056 074269064 074269072 074269080 074269098 074269106 074269114 074269122 074269148 074269155 074269163 074269171 074269189 074269197 074269205 074269338 074269346 074269353 074269361 074269379 074269387 074269395 074269403 074269429 074269445

MATERIAL SAFETY DATA SHEET

HERCULITE ULTRA

Restorative Composite

1 - IDENTIFICATION

Manufacturer: Kerr Corporation
Address: 1717 West Collins Avenue
City, State, Zip: Orange, CA 92867-5422
Telephone: 1-800-KERR-123
Emergency: **Chemtrec 1-800-424-9300**
Date Prepared: October 2008

2 - COMPOSITION INFORMATION

Hazardous Ingredients

	CAS #	PEL	TLV	%
Uncured Methacrylate Ester Monomers	109-16-0	N/A	N/A	20-45

Other Ingredients

Non-hazardous inert mineral fillers, non-hazardous activators and stabilizers

3 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/D
Specific Gravity (H_20 = 1): 2.5
Vapor Pressure (mm Hg): N/D
Melting Point: N/D
Vapor Density (AIR = 1): N/D
Solubility in Water: Insoluble
Reactivity in Water: N/A
Appearance and Odor: Colored paste with fruity ester-like odor

4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/D
Flammable Limits: **LEL:** N/A **UEL:** N/D
Extinguishing Media: Chemical foam, CO_2, dry chemical
Special Fire Fighting Procedures: Wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Heat can cause polymerization with rapid release of energy.

5 - REACTIVITY DATA

Stability: Stable if stored as directed.
Incompatibility (Material to Avoid): Reducing and oxidizing agents, peroxides and amines
Hazardous Decomposition Products: Oxides of carbon
Hazardous Polymerization: May Occur
Conditions to Avoid: Heat, light, aging and sources of contamination

6 - HEALTH HAZARD DATA

Routes of Entry:
Skin: Prolonged or repeated exposure to uncured material may cause irritation or skin rash especially in sensitive individuals.
Eyes: May cause irritation and damage if not removed promptly.
Inhalation: Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion: Uncured material may be harmful if swallowed.
Carcinogenicity - **NTP:** No
IARC Monographs: No **OSHA Regulated Carcinogen:** No

7 - EMERGENCY FIRST AID PROCEDURES

Skin: Wash thoroughly with soap and water.
Eyes: Flush with water for 15 minutes including under eyelids.
Inhalation: Remove to fresh air. Get medical attention if discomfort persists.
Ingestion: Rinse mouth out with water. Do not induce vomiting. Seek medical attention.

8 - PRECAUTIONS FOR SAFE HANDLING & USE

Steps to be taken in case material is released or spilled: Absorb spills with inert material. Keep spilled material out of sewers.
Waste Disposal Method: Unpolymerized (uncured) material may be RCRA hazardous waste. Incinerate uncured material in accordance with all federal, state and local regulations.
Precautions to be taken in handling and storing: Store in a cool, dry place away from heat light and ignition.

9 - CONTROL MEASURES

Respiratory Protection (Specify Type): Avoid prolonged or excessive breathing of vapors of uncured material.
VENTILATION:
Local Exhaust: Good general ventilation should be sufficient to control airborne levels of vapors released by uncured material.
Mechanical (General): Good general ventilation recommended.
Protective Gloves: Protective gloves recommended when contacting uncured material.
Eye Protection: Safety glasses recommended.
Other Protective Clothing or Equipment: N/A
Work/Hygiene Practices: Handle in accordance with good personal hygiene and safety practices. These practices include avoiding unnecessary exposure to uncured material.

10 - TRANSPORTATION INFORMATION

Not regulated.

11 - SPECIAL INFORMATION

HMIS (Hazardous Material Identification System) Rating:
H2 F1 R2 PPE-Gloves and safety glasses. Hazard information relates only to uncured material.
[HMIS Index: 4 - Severe Hazard; 3 -Serious Hazard;
2 - Moderate Hazard; 1 - Slight Hazard; 0 - Minimum Hazard]

Note: Hazard information contained on this MSDS form relates only to material in its uncured state. Thorough biocompatibility and toxicity testing of the cured material and its extracts have demonstrated that the material is non-toxic.

Note: This MSDS was prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and is to be used only for this product. The information in this MSDS is, to the best of our knowledge, believed to be accurate.

SAFETY DATA SHEET

Section 1. Product And Company Identification

Product Name: Herculite® Ultra
Product Use: Dental product: Composite

Manufacturer: Kerr Corporation
1717 W. Collins Ave.
Orange, CA 92867-5422
U.S.A.

Information Phone Number: 1-800-841-1428 (Customer Service)

Chemical Emergency Phone Number (Chemical Spills, Leaks, Fire, Exposure or Accident only):
CHEMTREC 1-800-424-9300 (in the US) 1-703-527-3887 (Outside the US)

SDS Date of Preparation/Revision: January 16, 2019

Section 2. Hazards Identification

GHS Classification:
Acute Oral Toxicity Category 4
Skin Irritation Category 2
Eye Irritation Category 2A
Skin Sensitization Category 1
Specific Target Organ Toxicity Single Exposure Category 3

Label Elements:
Warning!

Hazard Phrases
Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary Phrases:
Avoid breathing vapor.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
If skin irritation or a rash occurs: Get medical attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

Section 3. Composition/Information on Ingredients

Component	CAS No.	Amount
Enamel/Dentin	N/A	60-100%
Glass, oxide, chemicals	65997-17-3	30-60%
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl), hydrolysis products with silica	68909-20-6	10-30%
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	10-30%
2,2-bis(acryloyloxymethyl)butyl acrylate	15625-89-5	10-30%
3-trimethoxysilylpropyl methacrylate	2530-85-0	1-5%

Section 4. First Aid Measures

Inhalation: Immediately remove victim to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

Skin Contact: Flush thoroughly with water. Get medical attention if irritation or symptoms of exposure develop. Remove and launder contaminated clothing before re-use.

Eye Contact: Rinse thoroughly with water. Get medical attention if irritation occurs and persists.

Ingestion: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Keep the victim calm and warm. Get immediate medical attention.

Most important symptoms and effects, acute and delayed: Causes serious eye irritation. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Causes skin irritation and may cause an allergic skin reaction. Harmful if swallowed. Irritating to mouth, throat, and stomach.

Indication of immediate medical attention and special treatment, if needed: None required under normal conditions of use.

Section 5. Fire Fighting Measures

Suitable (and Unsuitable) Extinguishing Media: Use any media appropriate for the surrounding fire. Cool fire exposed containers with water.

Specific Hazards Arising from the Chemical: Combustion may produce carbon dioxide, carbon monoxide, nitrogen oxides, and metal oxides.

Special Protective Equipment and Precautions for Fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored. Cool fire-exposed containers with water. Contain water used in firefighting from entering sewers or natural waterways.

Section 6: Accidental Release Measures

Personal precautions, Protective equipment, and Emergency procedures: Evacuate spill area and keep unprotected personnel away. Avoid contact with eyes, skin and clothing. Wear appropriate protective clothing and equipment.

Environmental Precautions: Avoid releases to the environment. Report spill as required by local and federal regulations.

Methods and Materials for Containment and Cleaning up: Prompt cleanup and removal are necessary. Absorb spills with an inert material and place in an appropriate waste disposal container.

Section 7. Handling and Storage

Precautions for Safe Handling: Prevent contact with eyes, skin and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Wash thoroughly with soap and water after handling. Do not eat, drink or smoke in the work area. Remove and wash contaminated clothing before reuse.

Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, dry, well-ventilated area away from direct sunlight. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure Controls / Personal Protection

Exposure Limits

Chemical	Exposure Limit
Enamel/Dentin	None Established
Glass, oxide, chemicals	5 mg/m^3 TWA ACGIH TLV
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl), hydrolysis products with silica	10 mg/m^3 TWA ACGIH TLV
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	None Established
2,2-bis(acryloyloxymethyl)butyl acrylate	1 mg/m^3 TWA AIHA WEEL
3-trimethoxysilylpropyl methacrylate	None Established

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Respiratory Protection: None under normal use conditions with adequate ventilation. For operations where the occupational exposure limits are exceeded, an approved respirator with particulate cartridges is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with applicable regulations and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Hand protection: Impervious gloves are suggested to prevent skin contact. Contact your glove supplier for selection assistance.

Eye Protection: Chemical safety goggles are recommended if contact is possible.

Skin Protection: Wear protective clothing as needed to avoid skin contact and contamination of personal clothing.

Hygiene measures: Suitable eye and skin washing facilities should be available in the work area.

Section 9. Physical and Chemical Properties

Appearance:	Various colored paste	**Odor:**	Fruity ester-like
Odor Threshold:	Not available	**pH:**	Not available
Melting/Freezing Point:	Not available	**Boiling Point/Range:**	Not available
Flash Point:	Not flammable	**Evaporation Rate:**	Not available
Flammability: (Solid, Gas)	Not applicable	**Flammability Limits:**	LEL: Not applicable UEL: Not applicable
Vapor Pressure:	Not available	**Vapor Density:**	Not available
Relative Density:	2.5	**Solubilities:**	Insoluble in water
Partition Coefficient: (N-Octanol/Water)	Not available	**Autoignition Temperature:**	Not available
Decomposition Temperature:	Not available	**Viscosity:**	Not available

Section 10. Stability and Reactivity

Reactivity: The product is not expected to be reactive.
Chemical Stability: Stable under normal storage and handling conditions.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to avoid: Avoid heat and direct sunlight.
Incompatible Materials: Oxidizing materials, reducing materials, peroxides, amines.
Hazardous decomposition products: None if stored normally.

Section 11. Toxicological Information

Potential Health Effects:

Inhalation: May cause respiratory irritation. Exposure to decomposition products may cause a health hazard.
Skin Contact: Causes skin irritation and may cause an allergic skin reaction.
Eye Contact: Causes serious eye irritation.
Ingestion: Harmful if swallowed. Irritating to mouth, throat and stomach.
Chronic Hazards: None expected.

Skin Sensitization: No adverse effects expected. Components are not sensitizers.

Respiratory Sensitization: No data available. This product is not expected to cause respiratory sensitization.

Germ Cell Mutagenicity: None of the components are mutagenic.

Carcinogen: None of the components are listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH, or OSHA.

Developmental / Reproductive Toxicity: Mercury: Reproductive effects have been observed on tests with laboratory animals.

Specific Target Organ Toxicity (Single Exposure): 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate and 2,2-bis(acryloyloxymethyl)butyl acrylate may cause respiratory tract irritation.

Specific Target Organ Toxicity (Repeated Exposure): No data available.

Aspiration Toxicity: Not an aspiration hazard.

Acute Toxicity Values:
Product ATE: 805 mg/kg (Oral)
Enamel/Dentin: LD50 Dermal rabbit: > 2000 mg/kg; LD50 Oral rat: > 1000 mg//kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl), hydrolysis products with silica:
LD50 Oral rat: = > 5000 mg/kg
2,2-bis(acryloyloxymethyl)butyl acrylate: LD50 Dermal rabbit: 5170 mg/kg; LD50 Oral rat: 5709 mg/kg
3-trimethoxysilylpropyl methacrylate: LD50 Oral rat: 23504 mg/kg

Section 12. Ecological Information

Toxicity:
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl), hydrolysis products with silica:
96 hr LC50 Brachydanio rerio > 10000 mg/L; 24 hr EC50 Daphnia magna > 1000 mg/L;
72 hr Scenedesnus subspicatus > 10000 mg/L

Persistence and degradability: Biodegradation is not applicable to inorganic substances.

Bioaccumulative Potential:
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate:
log P_{ow} 3, potential for bioaccumulative is low.
2,2-bis(acryloyloxymethyl)butyl acrylate: log P_{ow} 0.67, potential for bioaccumulative is low.
3-trimethoxysilylpropyl methacrylate: log P_{ow} 2.1, potential for bioaccumulative is low.
Mobility in Soil: No data available.

Other Adverse Effects: No data available.

Section 13. Disposal Considerations

Disposal: For unused product, dispose of in accordance with Federal and local regulations.
Container Disposal: Dispose of empty container in accordance with Federal and local regulations.

Section 14. Transport Information

	UN Number	UN Proper Shipping Name	Hazard Class(s)	Packing Group	Environmental Hazards
US DOT	None	Not Regulated			None
EU ADR/RID	None	Not Regulated			None
IMDG	None	Not Regulated			None
IATA/ICAO	None	Not Regulated			None

Special Precautions for User: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in Bulk According to Annex II MARPOL 73/78 and the IBC Code: Not applicable – product is transported only in packaged form.

Section 15. Regulatory Information

U.S. Federal Regulations:

EPA SARA 311/312 Hazard Classification: Refer to Section 2 for OSHA Hazard Classification.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Protection Of Stratospheric Ozone: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

International Inventories

US EPA TSCA Inventory: All of the components of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or exempt.

Canada CEPA: All of the components of this material are listed on the DSL or exempt.

Section 16. Other Information

Effective Date: January 16, 2019
Supersedes Date: December 22, 2014
Revision Summary: All Sections – New SDS format

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date of preparation, however, KERR Corporation makes no warranty with respect to the accuracy or suitability of the recommendations, and assumes no liability to any use thereof.